

REMARKS

Applicants note that they have not received initialed Form 1449's for Information Disclosure Statements filed on April 6, 2001 citing U.S. Patent No. 6,198,473 and February 7, 2002 citing two articles. Applicant's respectfully requested that the Examiner provide the initialed 1449's. If the Examiner did not receive these Information Disclosure Statements, Applicant's request that the Examiner call Applicant's representative Theodore Magee before issuing a next action so that the art can be presented to the Examiner.

In the Office Action, claims 1, 3, 5-12, 14, 16-18, and 25-31 were rejected under 35 U.S.C. § 103(a) as being obvious from Zenz (US Pat. No. 5,841,425) in view of Siddiqui et al. (US Pat. No. 6,097,371, hereinafter Siddiqui) and further in view of Edwards et al. (U.S. Pat. No. 6,362,811, hereinafter Edwards).

Zenz discloses a mouse and a trackball that include sensors for determining whether the user is holding the mouse or track ball with their left hand or with their right hand. In the mouse embodiment, the sensor is located in the natural gripping position for the user's thumb. Thus, when the user is holding the mouse, their thumb touches the sensor. (See Fig. 3c)

Siddiqui discloses a two-button mouse with a depressible wheel. Siddiqui does not show or suggest a thumb button.

Edwards discloses a three-button mouse designed to make pressing of a finger button less stressful by placing the thumb and index finger in an orientation where the user squeezes their thumb and finger together to press the finger button. Edwards does not show or suggest a thumb button.

The present application includes independent claims 1, 7, 14, 18, and 25. The patentability of each of these claims is discussed separately below.

Independent claim 1 and claims 3, 5, and 6

Independent claim 1 is directed toward a mouse that includes a thumb pinching area located on the side of the mouse near the mouse's bottom surface. The mouse also include two side buttons that are located above the thumb pinching area in a direction away from the mouse's bottom surface. The mouse further includes a primary button and a secondary button.

None of the cited references show such a mouse. In particular, none of the references show two buttons located above a thumb pinching area as well as a primary button and a secondary button.

In the Office Action, it was asserted that buttons 36 and 40 of Zenz are located above a thumb pinching area 64. However, it is clear that if buttons 36 and 40 are considered side buttons then Zenz lacks either a primary or secondary button as required by claim 1.

Neither Siddiqui nor Edwards show or suggest thumb buttons. As such, their combination with Zenz does not show a mouse with two thumb buttons located above a thumb pinching area.

Since none of the cited references show two buttons located above a thumb pinching area, a primary button and a secondary button, their combination does not render the invention of claim 1 obvious. As such, claim 1 and claims 3, 5, and 6, which depend therefrom, are patentable over the cited art.

Independent claim 7 and claims 8-12

Independent claim 7 is directed toward a mouse with a thumb gripping position and at least one button that is between the user's thumb and the user's index finger when the user's

thumb is in the thumb gripping position. The at least one button has a surface that is substantially level with a surface of the thumb gripping position.

None of the cited references show a mouse with such a side button. This can be seen in Fig. 3C of Zenz where it clear that there is no side button between the user's thumb and the user's index finger. Similarly, FIG. 1D of Siddiqui and FIG. 8 of Edwards show that there are no buttons between the user's thumb and the user's index finger on the mice disclosed in those references.

In the Final Office Action, it was asserted that FIG. 4D of Zenz showed a thumb button as found in claim 7. In FIG. 4D, Zenz shows a trackball device where the user activates a trackball 132 with their index finger and activates a button 40 with their thumb. As shown in FIG. 4d, the user's thumb is rested on the button when the user is gripping the trackball device. As a result, the button 40 constitutes the gripping position in Zenz.

Because of this, the gap between the user's thumb and index finger does not change when the user actuates button 40. As a result, button 40 does not meet the limitations of claim 7.

The Final Office Action also asserted that FIGS. 7 and 8 showed a side button that could be actuated by a user's thumb. However, FIGS. 7 and 8 only show buttons under the user's fingers. There are no buttons between the user's thumb and the user's index finger.

Since none of the cited references show a side button that is between the user's thumb and the user's index finger and is substantially level with a thumb gripping position, their combination does not show or suggest the invention of claim 7. As such, claim 7 and claims 8-12, which depend therefrom, are patentable over the cited art.

Independent claim 14 and claims 16 and 17

Independent claim 14 provides a mouse with a convex support for the user's ring finger and little finger. In claim 14, the convex support is separate from a secondary button on the mouse.

The mouse of claim 14 is not obvious from the cited art. In particular, there is no suggestion or motivation for modifying the cited references to form a mouse with a convex support for the user's ring finger and little finger where the support is separate from a button on the mouse.

For example, there is no motivation to modify the Zenz mouse to add a ring finger support surface that is separate from a button on the mouse. In Zenz, the user's ring finger is supported on a button so that the user can easily actuate the button with their ring finger. If a support were provided apart from the button, the user's ring finger would be in an unnatural position when it was resting on the support or when it was actuating the button. Similarly, Edwards provides a concave button to support the user's ring finger. As such, it would not be obvious to add a convex support for the ring finger because it would make it more difficult to actuate the ring finger button and would place the user's hand in an uncomfortable position. As shown in Edwards, those skilled in the art avoid designs that place the hand in unnatural positions because these positions strain the user's hand and can cause soft-tissue injuries. Because of this, those skilled in the art would not be motivated to modify the Zenz or Edwards mice to form the mouse of claim 14.

Lastly, Applicants note that even if the mice in the cited references were combined, the resulting mouse would have a concave support for the user's little finger since that is the only support shown for a little finger in any of the references.

Since the invention of claim 14 provides a convex support and

not a concave support, the invention of claim 14 is distinct from the cited combination.

Because there is no motivation to modify any of the cited mice to form the mouse of claim 14, and because the combination of references would not produce the mouse of claim 14, claim 14 and claims 16 and 17, which depend therefrom, are patentable over the cited art.

Independent Claim 18

Independent claim 18 is similar to claim 14 in that it provides a ring finger contact area and a little finger contact area that are both convex, where the ring finger contact area is separate from a secondary button. As discussed above, providing such contact areas on a mouse is not obvious from Edwards, Zenz and Siddiqui. As such, claim 18 is patentably distinct from the cited art.

Independent claim 25 and claims 26-31

Independent claim 25 provides a mouse with a wheel having at least fifty ribs. None of the cited references show a mouse with such a wheel. In particular, none of the references show a mouse with at least fifty ribs.

Note that the number of ribs on the wheel of the present invention provides an advantage to the mouse of claim 25.

In particular, it provides increased friction between the user's finger and the wheel thereby making it easier for the user to control the wheel.

None of the cited references discuss ribs on their wheel. As such, none of the references show or suggest the mouse of claim 25. Therefore, claim 25 and claims 26-31, which depend therefrom, are patentable over the cited art.

In the Office Action, Long (U.S. Patent No. 6,353,429) was made of record as showing a type of mouse with a wheel. Applicants note that Long is not prior art to the present

invention because Long's filing date is after the filing date of the present application.

Conclusion

In light of the above remarks, reconsideration and allowance of claims 1, 3, 5-12, 14, 16-18, and 25-31 is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: 

Theodore M. Magee, Reg. No. 39,758
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 334-3312

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MARKED-UP VERSION OF REPLACEMENT CLAIMS

1. (Twice Amended) A mouse input device for a computer system, the mouse capable of being moved across a working surface to move a displayed object on a computer display, the mouse comprising:
- an upper casing;
 - a bottom surface designed to face the working surface;
 - a thumb pinching area located on a side of the mouse proximate the bottom surface; ~~and~~
 - a primary button;
 - a secondary button; and
 - at least two side buttons located above the thumb pinching area in a direction away from the bottom surface.